

CLAIMS

That which is claimed is:

1. An article of footwear comprising:
an upper incorporating a textile element formed through a weft knitting process, the textile element having edges that are joined together to define at least a portion of a void for receiving a foot; and
a sole structure secured to the upper.
2. The article of footwear recited in claim 1, wherein the textile element forms at least a portion of a lateral side, a medial side, and an instep region of the upper.
3. The article of footwear recited in claim 1, wherein the edges include a pair of first edges that are joined to form a first seam extending longitudinally along a lower region of the upper.
4. The article of footwear recited in claim 3, wherein the edges include a pair of second edges that are joined to form a second seam extending along a heel region of the upper.
5. The article of footwear recited in claim 4, wherein the second seam extends vertically.
6. The article of footwear recited in claim 4, wherein the edges include at least a pair of third edges that are joined to form a third seam extending through a forefoot area of the upper.
7. The article of footwear recited in claim 1, wherein the textile element has a first area and a second area with a unitary construction, the first area being formed of a first stitch type, and the second area being formed of a second stitch type that is different from the first stitch type to impart varying textures to a surface of the textile element.
8. The article of footwear recited in claim 7, wherein the first stitch type provides a substantially smooth texture to the first area.

9. The article of footwear recited in claim 8, wherein the second stitch type provides a generally rough texture to the second area.

10. The article of footwear recited in claim 7, wherein at least one of the first stitch type and the second stitch type form an aperture in the textile element.

11. The article of footwear recited in claim 1, wherein the textile element is one of an exterior layer, an intermediate layer, and an interior layer of the upper.

12. The article of footwear recited in claim 1, wherein the upper includes an exterior layer, an intermediate layer, and an interior layer, and the textile element forms at least a portion of the interior layer.

13. The article of footwear recited in claim 1, wherein the textile layer forms at least a portion of both an interior surface and an exterior surface of the upper.

14. The article of footwear recited in claim 13, wherein at least one additional element is secured to the exterior surface and forms a portion of the exterior surface.

15. The article of footwear recited in claim 14, wherein the additional element is secured to a forefoot area of the upper.

16. The article of footwear recited in claim 14, wherein the additional element is secured to a heel area of the upper.

17. The article of footwear recited in claim 1, wherein the textile element forms an interior surface of the upper.

18. The article of footwear recited in claim 1, wherein the weft knitting process is circular knitting.

19. The article of footwear recited in claim 1, wherein the weft knitting process is flat knitting.

20. An article of footwear comprising:

an upper incorporating a textile element formed through a weft knitting process, the textile element having a first area and a second area with a unitary construction, the first area being formed of a first stitch configuration, and the second area being formed of a second stitch configuration that is different from the first stitch configuration to impart varying properties to the textile element; and
a sole structure secured to the upper.

21. The article of footwear recited in claim 20, wherein the first stitch configuration provides a substantially smooth texture to the first area, and the second stitch configuration provides a texture to the second area that is rougher than the smooth texture.

22. The article of footwear recited in claim 21, wherein the second stitch configuration forms a rib structure in the second area.

23. The article of footwear recited in claim 20, wherein at least one of the first stitch configuration and the second stitch configuration forms an aperture in the textile element.

24. The article of footwear recited in claim 20, wherein the textile element is one of an exterior layer, an intermediate layer, and an interior layer of the upper.

25. The article of footwear recited in claim 20, wherein the upper includes an exterior layer, an intermediate layer, and an interior layer, and the textile element forms at least a portion of the interior layer.

26. The article of footwear recited in claim 20, wherein the textile layer forms at least a portion of both an interior surface and an exterior surface of the upper.

27. The article of footwear recited in claim 20, wherein the textile element forms an interior surface of the upper.

28. An article of footwear comprising:

an upper incorporating a textile element having edges that are joined together to form seams and define at least a portion of a void for receiving a foot, the seams including a first seam and a second seam, the first seam extending from a heel area to a forefoot area of the footwear along a lower surface of the upper, and the second seam extending vertically in the heel area; and
a sole structure secured to the upper.

29. The article of footwear recited in claim 28, wherein the footwear includes a third seam extending through the forefoot area of the upper.

30. The article of footwear recited in claim 28, wherein the textile element has a first area and a second area with a unitary construction, the first area being formed of a first stitch type, and the second area being formed of a second stitch type that is different from the first stitch type to impart varying properties to the textile element.

31. The article of footwear recited in claim 30, wherein at least one of the first stitch type and the second stitch type form an aperture in the textile element.

32. The article of footwear recited in claim 30, wherein the varying properties include varying elasticity of the textile element.

33. The article of footwear recited in claim 30, wherein the varying properties include varying air permeability of the textile element.

34. The article of footwear recited in claim 28, wherein the textile element is one of an exterior layer, an intermediate layer, and an interior layer of the upper.

35. The article of footwear recited in claim 28, wherein the textile layer forms at least a portion of both an interior surface and an exterior surface of the upper.

36. The article of footwear recited in claim 28, wherein the textile layer forms an interior surface of the footwear, and at least one additional layer forms an exterior surface of the footwear.

37. The article of footwear recited in claim 28, wherein the textile element is formed through a weft knitting process.

38. The article of footwear recited in claim 37, wherein the weft knitting process is one of circular knitting and flat knitting.

39. The article of footwear recited in claim 28, wherein the textile element is formed through a warp knitting process.

40. The article of footwear recited in claim 39, wherein the warp knitting process is jacquard double needle-bar raschel.

41. An article of footwear comprising:

an upper incorporating a textile element formed with a knitting machine, the textile element being removed from a textile structure that includes an outline of the textile element, and the textile element having edges that are joined together to define at least a portion of a void for receiving a foot; and
a sole structure secured to the upper.

42. The article of footwear recited in claim 41, wherein the knitting machine is a wide-tube circular knitting machine.

43. The article of footwear recited in claim 41, wherein the knitting machine is a jacquard double needle-bar raschel knitting machine.

44. The article of footwear recited in claim 41, wherein the edges include a pair of first edges that are joined to form a first seam extending longitudinally along a lower region of the upper.

45. The article of footwear recited in claim 44, wherein the edges include a pair of second edges that are joined to form a second seam extending along a heel region of the upper.

46. The article of footwear recited in claim 45, wherein the edges include at least a pair of third edges that are joined to form a second seam extending through a forefoot area of the upper.

47. The article of footwear recited in claim 41, wherein the textile element has a first area and a second area with a unitary construction, the first area being formed of a first stitch type, and the second area being formed of a second stitch type that is different from the first stitch type to impart varying textures to a surface of the textile element.

48. The article of footwear recited in claim 41, wherein the textile element is one of an exterior layer, an intermediate layer, and an interior layer of the upper.

49. The article of footwear recited in claim 41, wherein the textile element forms an interior surface of the upper.

50. A method of manufacturing an article of footwear, the method comprising steps of:
mechanically-manipulating a yarn with a circular knitting machine to form a cylindrical textile structure;
removing at least one textile element from the textile structure;
incorporating the textile element into an upper of the article of footwear.

51. The method recited in claim 50, wherein the step of mechanically-manipulating includes utilizing a wide-tube circular knitting machine.

52. The method recited in claim 50, wherein the step of mechanically-manipulating includes forming a texture in the cylindrical textile structure with a shape of the textile element.

53. The method recited in claim 50, wherein the step of mechanically manipulating includes forming the textile element to include a first area and a second area with a unitary construction, the first area being formed of a first stitch configuration, and the second area being formed of a second stitch configuration that is different from the first stitch configuration to impart varying textures to a surface of the textile element.

54. The method recited in claim 50, wherein the step of mechanically manipulating includes forming at least two textile elements in the cylindrical textile structure.

55. The method recited in claim 50, wherein the step of mechanically manipulating includes forming apertures in the textile element.

56. The method recited in claim 50, wherein the step of incorporating includes securing a first pair of edges of the textile element to each other to form a first seam that extends along a lower region of the upper.

57. The method recited in claim 56, wherein the step of incorporating further includes securing a second pair of edges of the textile element to each other to form a second seam that extends along a heel region of the upper.

58. A method of manufacturing an article of footwear, the method comprising steps of:
mechanically-manipulating a yarn with a knitting machine to form a textile structure
having an outline of at least one textile element;
removing the textile element from the textile structure;
incorporating the textile element into an upper of the article of footwear.

59. The method recited in claim 58, wherein the step of mechanically-manipulating includes utilizing a wide-tube circular knitting machine.

60. The method recited in claim 59, wherein the step of mechanically-manipulating includes forming a texture in the cylindrical textile structure with a shape of the textile element.

61. The method recited in claim 58, wherein the step of mechanically-manipulating includes utilizing a jacquard double needle-bar raschel knitting machine.

62. The method recited in claim 58, wherein the step of mechanically manipulating includes forming the textile element to include a first area and a second area with a unitary construction, the first area being formed of a first stitch configuration, and the second area being formed of a second stitch configuration that is different from the first stitch configuration to impart varying textures to a surface of the textile element.

63. The method recited in claim 58, wherein the step of incorporating includes securing a first pair of edges of the textile element to each other to form a first seam that extends along a lower region of the upper.

64. The method recited in claim 58, wherein the step of incorporating further includes securing a second pair of edges of the textile element to each other to form a second seam that extends along a heel region of the upper.

65. An article of footwear comprising:

an upper incorporating a textile element formed through a flat knitting process, the textile element having a first area and a second area with a unitary construction, the first area having a first set of properties, and the second area having a second set of properties that are different from the first set of properties to impart varying characteristics to the textile element; and

a sole structure secured to the upper.

66. The article of footwear recited in claim 65, wherein the first set of properties and the second set of properties are at least one of a stitch configuration and a yarn type.

67. The article of footwear recited in claim 65, wherein the textile element is one of an exterior layer, an intermediate layer, and an interior layer of the upper.